DK

STAR WARS®

INCREDIBLE CROSS-SECTIONS

THE ULTIMATE GUIDE TO STAR WARS VEHICLES AND SPACECRAFT

Written by
DAVID WEST REYNOLDS

Illustrated by
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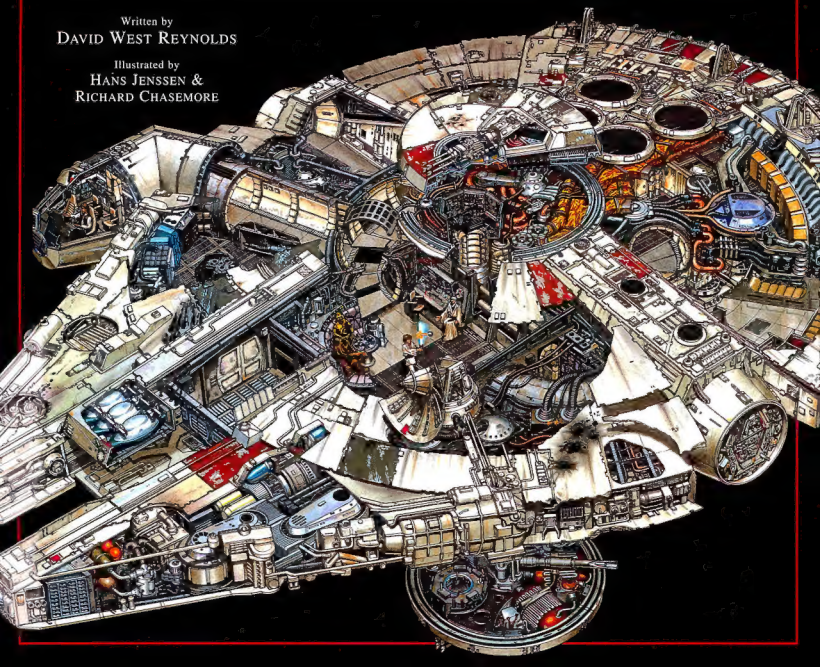
RICHARD CHASEMORE



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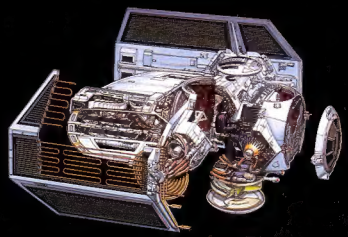


INTRODUCTION

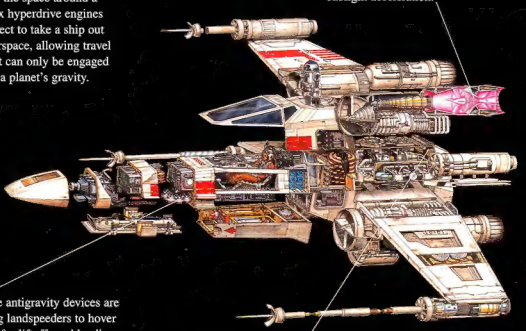
THE DAZZLING SPACECRAFT and exotic vehicles of *Star Wars* soar across our cinema screens, almost becoming characters themselves with their intricate detail and fascinating designs. The richness of their conception invites curiosity: what's inside a Jawa sandcrawler, and how does a Star Destroyer deploy its TIE fighters? Where was Ben Kenobi when he deactivated the Death Star's tractor beam? Here at last are revealed the interior layouts and components of these amazing vessels, answering all these questions and more, showing where all the action takes place and how their systems function. The most meticulously detailed research and design work was undertaken to make the extraordinary illustrations of this book definitive. You can spot Chewbacca's bowcaster in the main hold of the *Millennium Falcon*, and you can see in Boba Fett's *Slave I* bunk the data book in which he has finally registered Han Solo as "captured". Many of these craft have been mysteries; their secrets are now unveiled. Explore them for yourself, and revel in the depth of one of the great stories of our age.

SPACECRAFT ENGINES

The advanced engine technology of *Star Wars* takes many forms. Repulsorlifts are safe and reliable devices that lift a ship from the ground and take it into the upper atmosphere of a planet, cushioning its landing upon return. Sublight drives are more intricate and powerful thrust engines, which are used for navigating a ship in the space around a planet. Finally, complex hyperdrive engines use a trans-physical effect to take a ship out of real space into hyperspace, allowing travel between distant stars. It can only be engaged when a ship is clear of a planet's gravity.

SUBLIGHT DRIVES

Spacecraft engage their sublight engines once they are well clear of any facilities or personnel that might be harmed by the mildly radioactive emissions. A variety of sublight engine designs exploit the principle of ion thrust, achieved through various reactants and electronic accelerators from potent fuel mixtures. Fuels can take the form of pressurized radioactive gas, volatile composite fluids, or explosive liquid metal. Acceleration compensators project appropriately modified gravity effects within a spacecraft to preserve pilots and passengers from forceful sublight acceleration.



REPULSORLIFTS

These low-maintenance antigravity devices are commonplace, allowing landspeeders to hover and guiding spacecraft for liftoffs and landings. They can even be built into floating droids, although the miniaturized power systems for these are so expensive that they are only used by the Empire. Repulsorlift airspeeders and other such ground-based craft are strictly limited in the altitudes they can reach, with most speeders offering only 2-50 metres of "float." Flight-grade repulsorlifts can carry a vehicle to suborbital altitudes, but only true spacecraft employ these powerful devices.

HYPERDRIVE

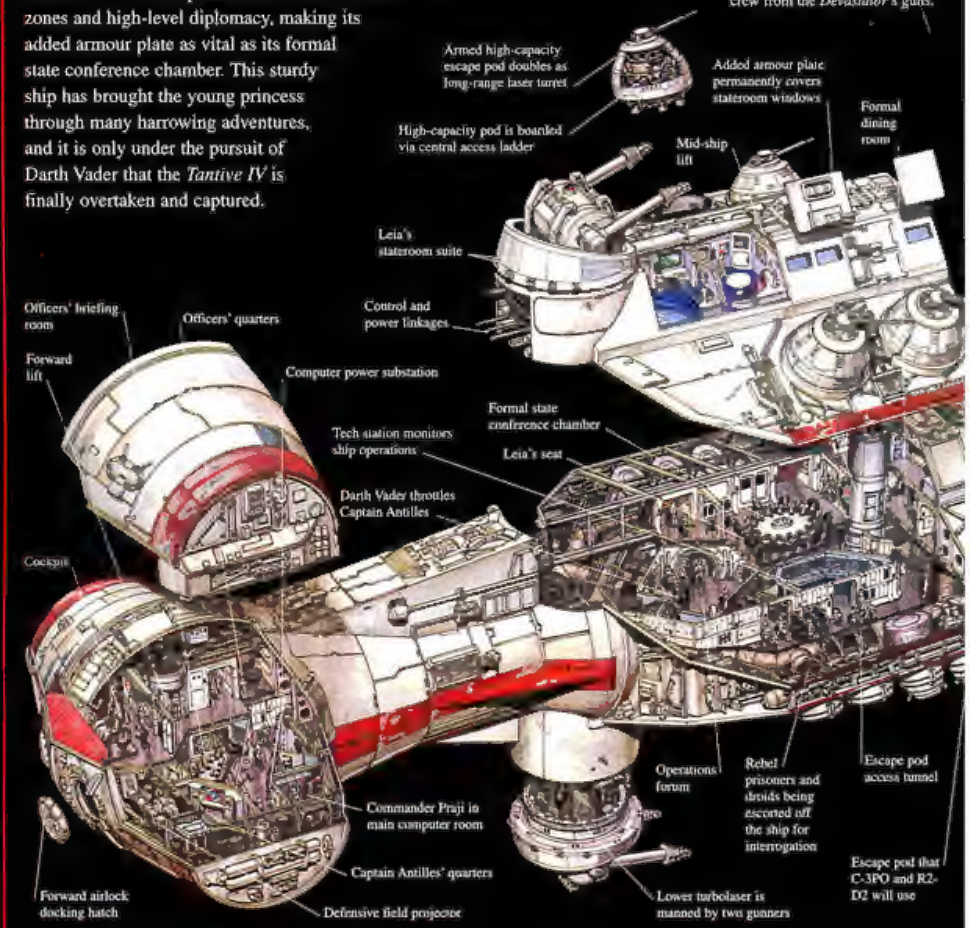
Employing an energy effect rather than the matter emissions of sublight engines, hyperdrives are built in many configurations, emphasizing either power, reliability, or lower energy use … no one engine can offer every advantage at once. The multiple components of a hyperdrive system may be located in one area or built into several quarters of a ship for easier maintenance access. Navigation through hyperspace involves extremely complex calculations. Daring pilots may cheat these calculations beyond safety margins, cutting dangerously close to the hyperspace "mass shadows" of real-space bodies, as Han Solo did when he made his notorious impossibly fast Kessel Run.

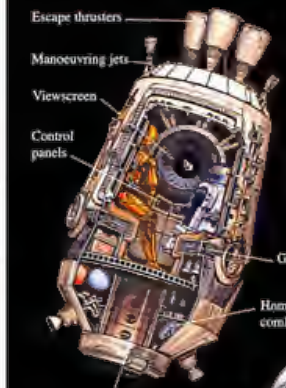
BLOCKADE RUNNER

PRINCESS LEIA ORGANA OF ALDERAAN travels far and wide on board her consular starship *Tantive IV*, negotiating peace settlements and bringing aid to imperilled populations. Commanded by the daring and loyal Captain Antilles, Leia's *Tantive IV* is a Corellian Corvette: an older, hand-crafted ship of a make seen throughout the galaxy, and famous for its versatility. Under the cover of diplomatic immunity, the senator-princess uses her ship for missions of espionage against the Empire and covert communications for the Rebel Alliance. The *Tantive IV*'s mission profile takes it into both war zones and high-level diplomacy, making its added armour plate as vital as its formal state conference chamber. This sturdy ship has brought the young princess through many harrowing adventures, and it is only under the pursuit of Darth Vader that the *Tantive IV* is finally overtaken and captured.

ESCAPE PODS

Spacecraft escape pods range from coffin-like capsules to large lifeboats which are small ships in their own right. The Blockade Runner carries eight small escape pods rated for up to three people, and four laser-armed pods which seat 12. More sophisticated than the smaller pods, these lifeboats nonetheless have a very limited range. None of the *Tantive IV*'s escape systems could save its crew from the *Devastator*'s guns.


Armed high-capacity escape pod doubles as long-range laser turret
Added armour plate permanently covers stateroom windows
High-capacity pod is boarded via central access ladder
Formal dining room
Mid-ship lift
Leia's stateroom suite
Control and power linkages
Officers' briefing room
Officers' quarters
Forward lift
Computer power substation
Formal state conference chamber
Tech station monitors ship operations
Leia's seat
Darth Vader throttles Captain Antilles
Cockpit
Commander Praji in main computer room
Captain Antilles' quarters
Forward airlock docking hatch
Defensive field projector
Operations forum
Rebel prisoners and droids being escorted off the ship for interrogation
Escape pod access tunnel
Lower turbolaser is manned by two gunners
Escape pod that C-3PO and R2-D2 will use

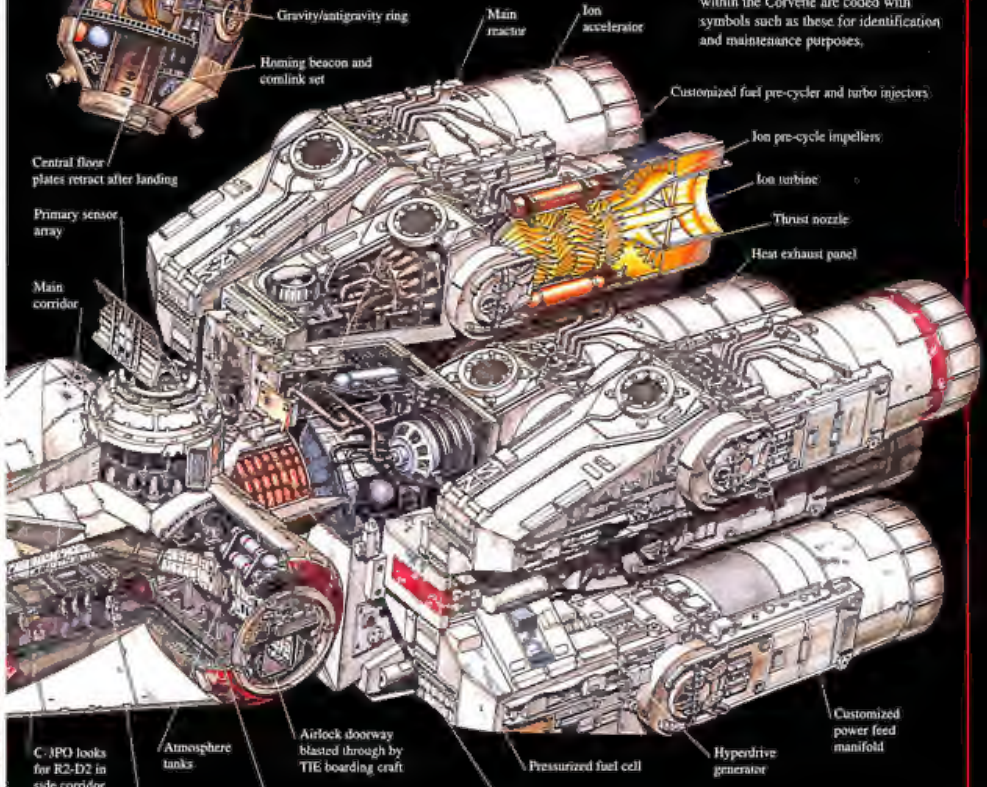


R2 AND 3PO'S ESCAPE

The small pod used by R2-D2 and C-3PO carries a minimum of equipment: simple rocket engines propel the pod away from danger as it ejects, using basic technology unaffected by magnetic or electrical interference. A gravity ring beneath the seat helps keep passengers secure above and cushions the shock of landing by projecting an antigravity field below. Only a single viewport is built in: a small slot window which is used for checking the landing environment before emerging. Fore and aft cameras feed a monitor inside to help it escape peril and find a suitable landing site.

SHIPBOARD SYMBOLS

The components of functional systems within the Corvette are coded with symbols such as these for identification and maintenance purposes.


Gravity/antigravity ring
Homing beacon and comlink set
Main reactor
Ion accelerator
Customized fuel pre-cycler and turbo injectors
Ion pre-cycle impellers
Ion turbine
Thrust nozzle
Heat exhaust panel
Central floor plates retract after landing
Primary sensor array
Main corridor
C-3PO looks for R2-D2 in side corridor
Princess Leia gives R2-D2 the Death Star plans and her secret message for Obi-Wan Kenobi
Atmosphere tanks
Airlock doorway blasted through by TIE boarding craft
Magnetic safety shield generator ring sustains atmosphere over hull breach at airlock
Pressurized fuel cell
Hyperdrive generator
Customized power feed manifold
Blast damage from the Star Destroyer *Devastator* overloaded the starboard shield projector, causing an explosion which damaged the power generator system. The main reactor had to be shut down, crippling the *Tantive IV*

THE CAPABLE CORVETTE

Sporting twin turbolaser turrets and a massive drive block of eleven ion turbine engines for speed, the Corellian Corvette balances defensive capabilities with a high power-to-mass ratio, meaning that what it can't shoot down it can generally outrun. These capable ships have been adapted to many uses, from cargo and passenger transport to scientific and military applications, but their most notorious use is in the hands of Corellian smugglers.

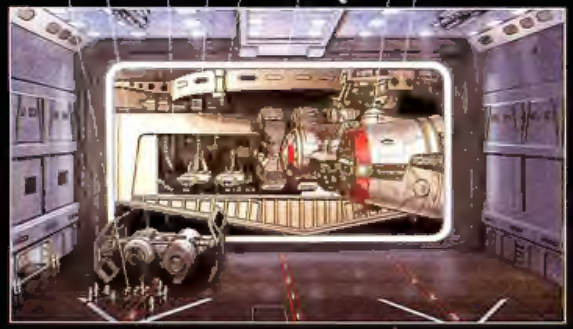
CONTRABANDITS

Blending anonymously into galactic space traffic, Corellian smugglers skilfully pilot their multi-engined Corvettes through Imperial security zones to avoid duties and taxes (or arrest for dealing in weapons and illegal goods). They are hard to spot, and chagrined Imperial officials have given the make its nickname "Blockade Runner".

The Evolution of the Star Destroyer

The *Victory*-class Star Destroyer was developed in the final years of the Old Republic as a top-of-the-line peacekeeping battleship. Under the Emperor's rule, these have been superseded by the new *Imperial*-class Star Destroyers. At 1600 metres in length these dwarf their predecessors. Darth Vader's Star Destroyer *Devastator*, with which he captured *Tantive IV*, was of the *Imperial*-class I type. Class II Star Destroyers made up the fleet which captured the Rebel base on Hoth. Lord Vader led this fleet from the *Executor*, first of the Super Star Destroyers, over eight times as large as the *Imperial*-class ships.

Main engine turbine
Tractor beam targeting array
Command bridge
Backup engine reactor
Heavy turbolaser battery
Heavy turbolaser turret
Heavy ion cannon turret
Starboard main engine thrust nozzle
Turret traverse motors
Turbolaser turret auxiliary power cells
Subsidiary reactor
Turbolaser station
Lateral quad-laser battery
Anti-resonance plates
Sentinel-class landing craft with Commander Praji's landing search team boarding
Primary power generator
TIE boarding craft
Flight deck control
Rebel prisoners
Landing barge
AT-AT
Captured *Tantive IV*
Electromagnetic paralyzing pincer crane
TIE bombers are kept protected in armoured compartments to limit damage if their bombs are set off
TIE bombers launch from the stern-most of the TIE launch hangars



Hangar View

This view from the main TIE landing bay shows the captured *Tantive IV* held by tractor beams and magnetic paralyzing pincer lock. Rebel prisoners are being escorted out of a TIE boarding craft for interrogation. In the background, the attack hangar can be seen with one set of armoured doors open. Stormtrooper Commander Praji supervises the preparation of a landing search team that will scour the dunes of Tatooine below for the stolen plans to the Death Star.

Star Destroyer

The Star Destroyer is a symbol of the Empire's military might, carrying devastating firepower and assault forces anywhere in the galaxy to subjugate opposition. A Star Destroyer can easily overhaul most fleeing craft, blasting them into submission or drawing them into its main hangar with tractor beams. *Imperial*-class Star Destroyers are 1600 metres long, bristling with turbolasers and ion cannons, and equipped with eight giant turret gun stations. Star Destroyers carry 9700 stormtroopers and a full wing of 72 TIE ships (typically including 48 TIE/In fighters, 12 TIE bombers, and 12 TIE boarding craft) as well as a range of attack and landing craft. A single Star Destroyer can overwhelm an entire rebellious planet. Major industrialized worlds are assaulted with a fleet of six Star Destroyers operating with support cruisers and supply craft. Such a force can obliterate any defences, occupying or completely destroying cities or settlements.

Axial defense turret
Flight deck control
Proton-shielded armor plate
Firing control
Turret
Blast cannon
Cooling system pumps
Power cells
Targeting level
Power feed and modulation control
Armoured doors of attack hangar, where landing craft are launched and landed
Tantive IV, held in main hangar
Main TIE landing bay
Auxiliary reactor
Tractor beam power cells
TIE fighters and bombers land in the main TIE landing bay and are transferred to these TIE launch hangars in transfer carriers
Raw materials
TIE fighter service and fuelling bays
Liquid stores
Shuttle craft for high-ranking officials are deployed through the small forward hangar, which also serves as backup to the main hangar
Pursuit tractor beams

Heavy Blaster Station

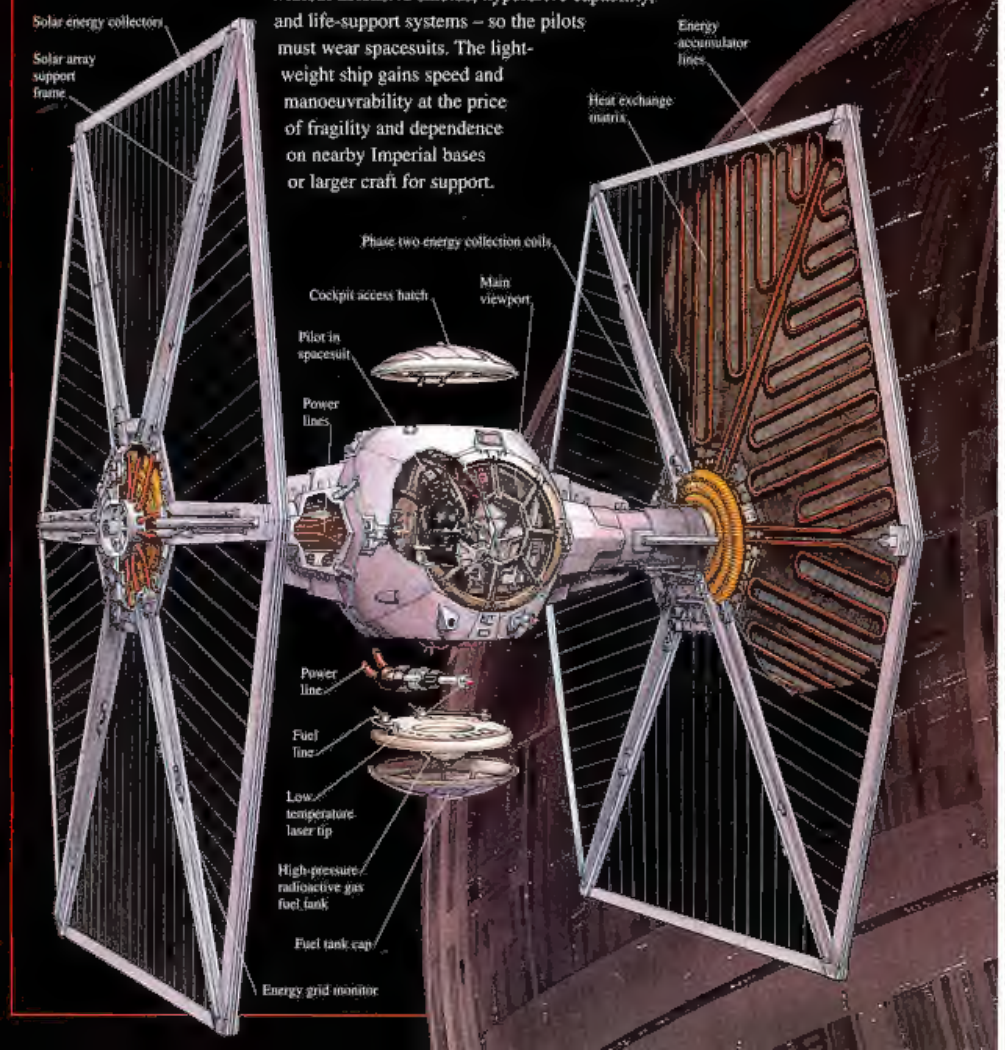
The heaviest weapons on board the Star Destroyer are the six turbolaser turrets positioned with the two heavy ion cannon turrets along the flanks of the upper deck structure. Fifty metres in diameter, these turbolasers can overload deflector shields and punch holes in the most heavily armoured spacecraft. While smaller, fast-moving ships are difficult to target with the turret guns, even a glancing hit from these cannons will destroy them.

TIE Fighter

Hurtling through space, TIE fighters are the most visible image of the Empire's wide-reaching power. The TIE fighter engine is the most precisely manufactured propulsion system in the galaxy. Solar ionization collects light energy and channels it through a reactor to fire emissions from a high-pressure radioactive gas. The engine has no moving parts, making it low-maintenance. To reduce the mass of the ship, TIE fighters are built without defensive shields, hyperdrive capability, and life-support systems – so the pilots must wear spacesuits. The lightweight ship gains speed and manoeuvrability at the price of fragility and dependence on nearby Imperial bases or larger craft for support.

All the Same

TIE pilots may never use the same ship twice, and develop no sentimental attachment to their craft as Rebels often do. TIE pilots know that every reconditioned fighter is identical to a factory-fresh ship; one is the same as many thousands – another reinforcement of Imperial philosophy of absolute conformity.

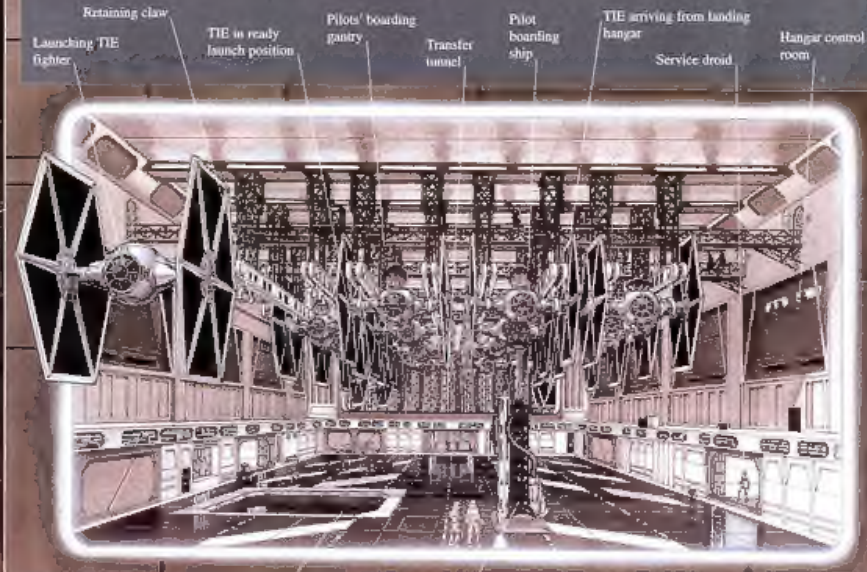


TIE Mission Profiles

TIE fighters are deployed for a variety of mission profiles. Their primary role is as space superiority fighters, engaging Rebel craft and defending Imperial bases and capital ships. Scout TIEs may travel alone to cover wide areas of space. Such individual scouts patrol the huge asteroid field left by the explosion of the planet Alderaan. Ships are assigned to escort duty in pairs, such as the twin TIEs that escort all flights of the Emperor's shuttle. Regular sentry groups of four TIE fighters patrol the space around Imperial bases, stations, and capital starships. A typical TIE fighter attack squadron consists of 12 ships, and a full attack wing consists of six squadrons, or 72 TIE fighters.

TIE Variants

The basic structure of the TIE fighter has proven so successful that derivative variants use the same cockpit, wing brace structure, and drive system components. The Advanced X1 (above centre) added shields and hyperdrive. The fearsome TIE Interceptor (above right) features improved ion drives and electronics, and advanced ion stream projectors giving exceptional control.



TIE Hangar

TIEs are launched from cycling racks of up to 72 ships in the larger hangars; smaller hangars may contain as few as two ships. Pilots board from overhead gantries and are released to space as they disengage from the front position in the rack system. Returning ships land in separate hangars, where they are guided into receiver-carriers by small tractor beams. The receivers carry the TIE to a debarkation station where the pilot exits. From there the TIE may be serviced and refuelled in a separate bay on its way through transfer tunnels to a launch hangar. In the launch hangar the TIE is cycled into the launch rack, ready for its next mission.

Pilot Psychology

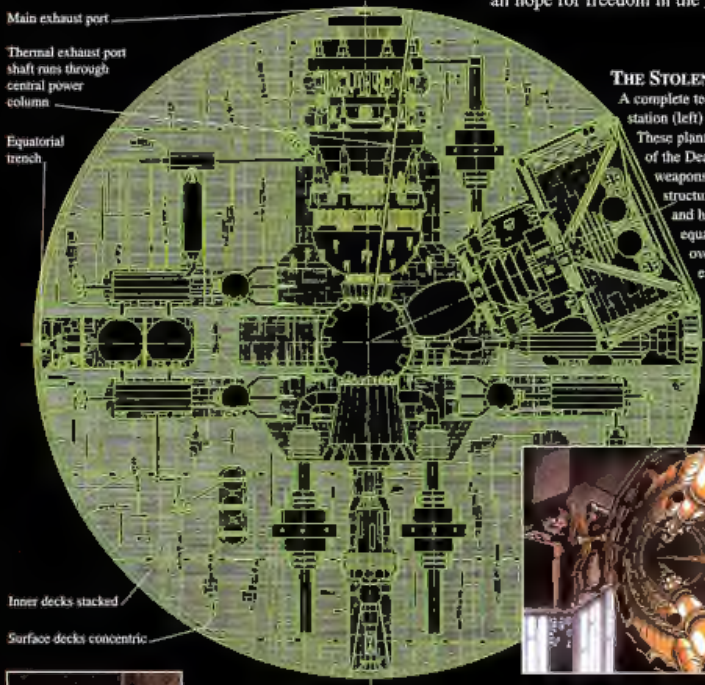
TIE fighters lack landing gear, a measure designed to reduce mass for maximum manoeuvrability. While the ships are structurally capable of sitting on their wings, they are not designed to land or disembark pilots without special support. This teaches the pilots to rely completely on higher authority.

Death Star

The Empire's gigantic battle station code named Death Star is 160 kilometres in diameter, large enough to be mistaken for a small moon. The brainchild of Grand Moff Tarkin, this colossal super-weapon is designed to enforce the Emperor's rule through terror, presenting both the symbol and reality of ultimate destructive power. Making use of the Empire's most advanced discoveries in super-engineering, the Death Star is built around a hypermatter reactor which can generate enough power to destroy an entire planet. Constructed in secret by slave labour and titanic factory machines, the Death Star's vast structure houses millions of soldiers and thousands of armed spacecraft, making it capable of occupying whole star systems by force. Elite gunners and troopers man the station's advanced weapons. The Death Star, once fully operational, represents a chilling spectre of totalitarian domination and threatens to extinguish all hope for freedom in the galaxy.

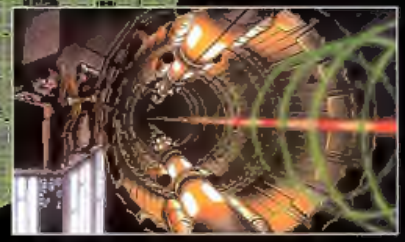
Crucial Weakness

The Death Star's powerful defences have one fatal flaw – small thermal exhaust ports that lead from the surface to the heart of the main reactor.


Main exhaust port
Thermal exhaust port shaft runs through central power column
Equatorial trench
Inner decks stacked
Surface decks concentric

The Stolen Plans

A complete technical readout of the battle station (left) was stolen by Rebel spies. These plans reveal the overwhelming might of the Death Star, detailing its myriad weapons systems and immense power structures. Ion engines, hyperdrives, and hangar bays ring the station's equatorial trench, while power cells over 15 kilometres wide distribute energy throughout the thousands of internal decks of the station. Air shafts and void spaces honeycomb the interior. Occupying the polar axis of the Death Star is its central power column, with the hypermatter reactor at its core.



Superlaser Tributary Beam Shaft

Eight tributary beams unite to form the superlaser primary beam. These tributary beams are arranged around the invisible central focusing field, firing in alternate sequence to build the power necessary to destroy a planet. The titanic energy of these beams must be monitored to prevent imbalance explosions.

Alderaan Destroyed

Without hesitation Grand Moff Tarkin orders the destruction of the peaceful planet Alderaan as the first demonstration of the Death Star's power. As the superlaser lances out at the blue-green planet, this horrific act wipes out billions of people.

Detention Block AA-23

A desperate plan takes Luke, Han, and Chewbacca into the heart of peril as they try to rescue Princess Leia. Disguised as stormtroopers, Luke and Han escort Chewbacca, their "prisoner", into Leia's detention block. The supervisor suspects trouble, and only immediate action will save the Rebels.

Trash Compactor 32-6-3827

Escaping Leia's cell block, the Rebels dive into a garbage chute and land in a trash compactor, where refuse of every kind is collected before being processed and dumped into space.

Air Shaft

Throughout the Death Star are vast air shafts. Extendable bridges connect passages across the shafts, but can be disabled. When Luke and Leia find themselves trapped at one of the air shafts, quick thinking and bravery provide the only way across.

Tractor Beam Reactor Coupling

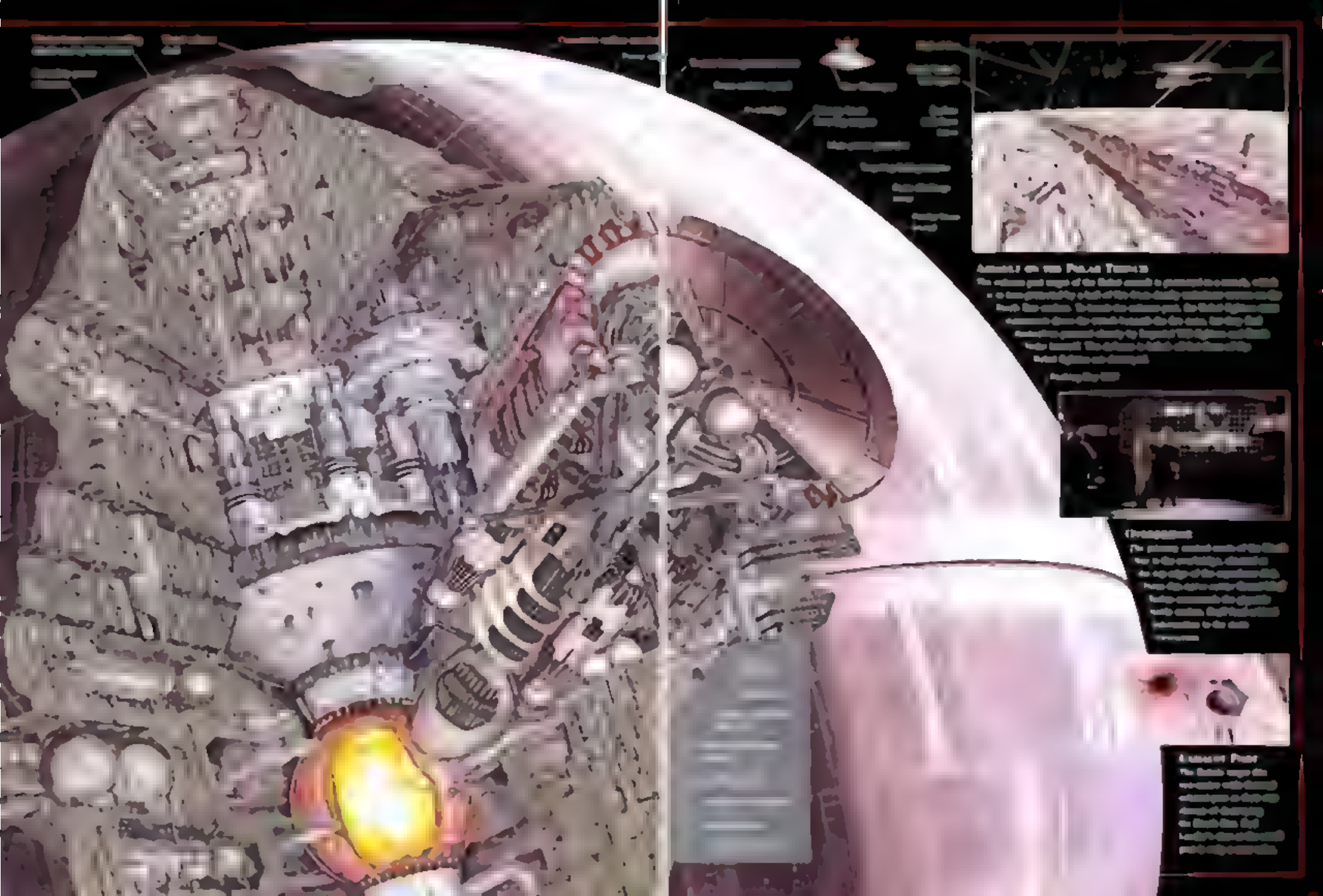
The Death Star tractor beam is coupled to the main reactor in seven locations. These power terminals stand atop generator towers 35 kilometres tall. The air is taut with high-voltage electricity throughout the shaft surrounding the tower. It is in this setting that Ben Kenobi secretly deactivates one of the power beams to allow the *Millennium Falcon* to escape.

Challenge and Sacrifice

Darth Vader senses the presence of his old Jedi master Obi-Wan Kenobi aboard the Death Star, and confronts him alone in a deadly lightsabre duel. Kenobi sacrifices himself to help his young friends escape, yielding to Vader in an empty victory in which, mysteriously, Obi-Wan becomes one with the Force.

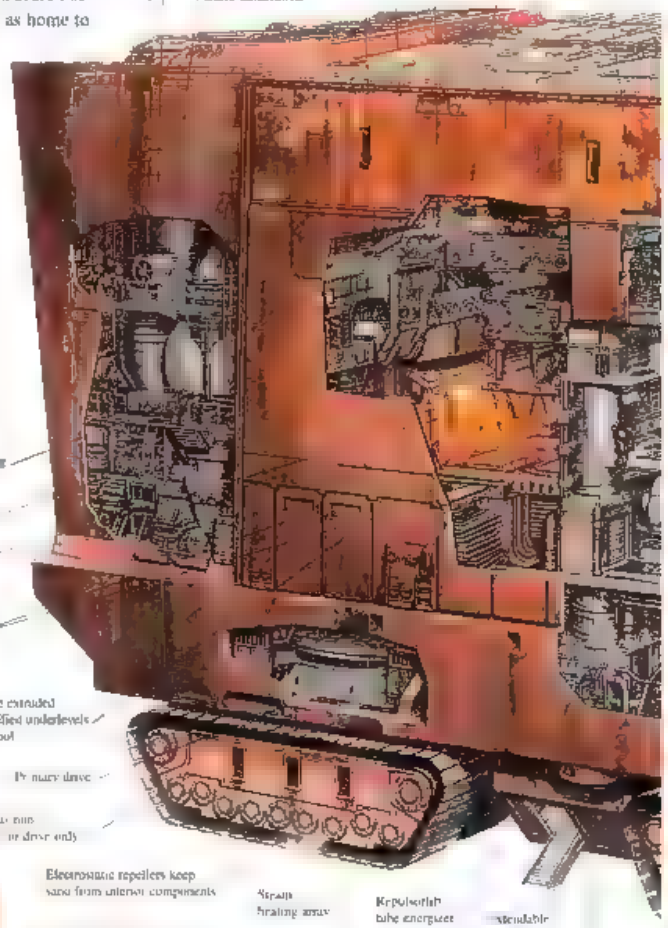
Docking Bay 3207

Drawn in by a tractor beam, the *Millennium Falcon* comes to rest in a pressurized hangar within the Death Star's equatorial trench. Magnetic shields over the entrance retain the atmosphere. Outboard power-feeds hook up to landed craft so that the ship reactors can be shut down while in the hangar.



SANDCRAWLER

A LEFTOVER TITAN from a forgotten mining era long ago, the Jawa sandcrawler patrols the deserts and wastelands of Tatooine in search of metal salvage and minerals. Serving as home to an entire clan of Jawas, the mobile sandcrawler makes its rounds across wide territory over the course of a year, hunting for the wrecks that dot Tatooine's surface from spaceship crashes through centuries past. Jawas also round up stray droids, junked vehicles and unwanted metal of any kind from settlements and moisture farmers. Pitted and scoured by numberless sandstorms, the sandcrawler serves the Jawas as transport, workshop, traveling store, and safe protection from the menaces of Sand People and desert monsters.

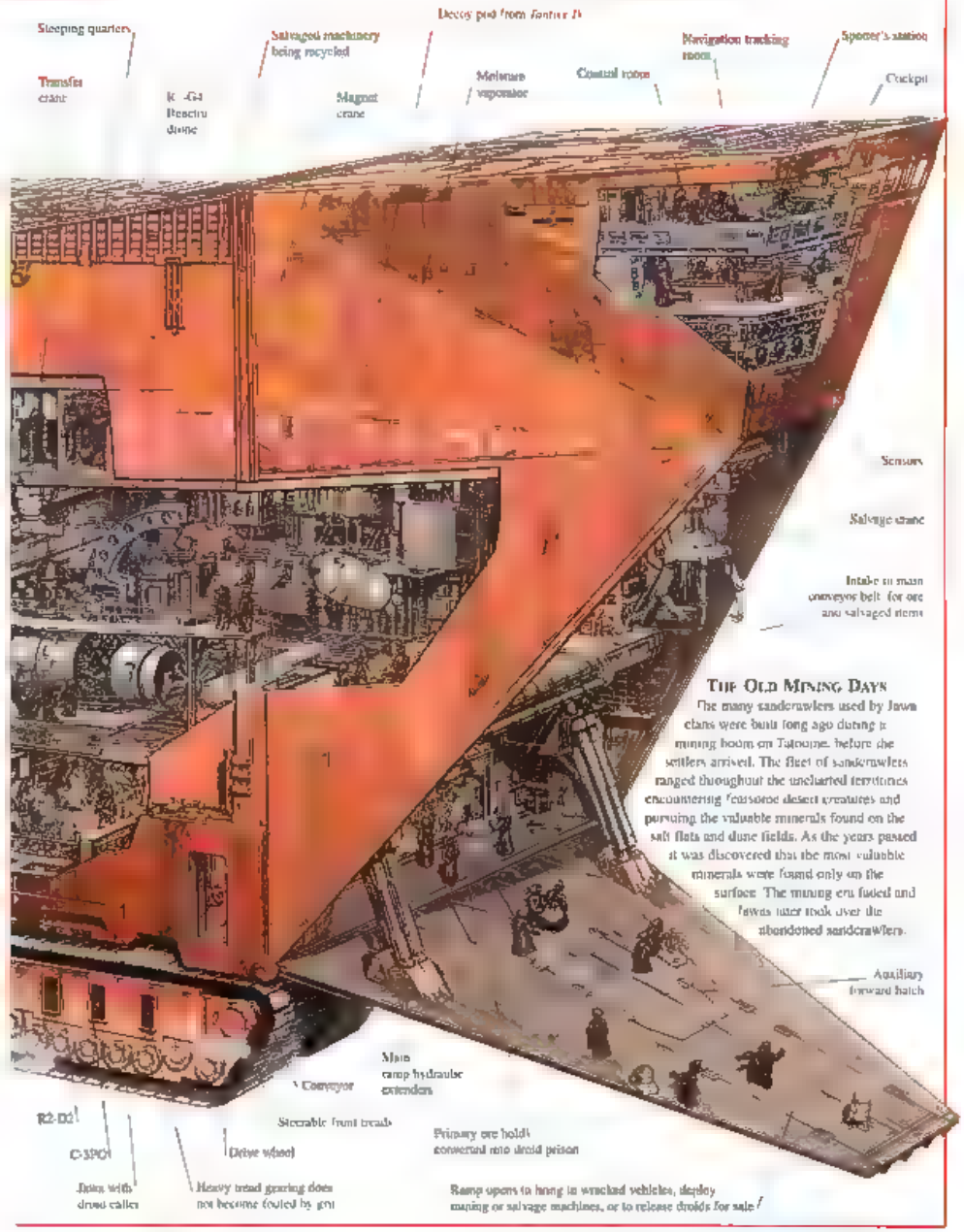

Case-hardened smashers crush minerals or compact metal for salvage
Drill grinders
Conveyor at top of lift
Power generators
Ore crusher
Laser ore processor
Reactor powers / entire sandcrawler
Engineering station
Maintenance passage
Reactor melts processed ore and metal into a superheated cascade
Power cells
Ingots are extruded from purified underlevels of slag pool
Rear treads turn steerable / or drive only
Electrostatic repellers keep sand from interior components
Sensor array
Repulsorlift tube energizer
Retractable starboard boarding gantry
Extendable repulsorlift tube

JAWA REPAIRS

Jawas are experts at making use of available components to repair machinery and can put together a working droid from the most surprising variety of scrap parts. However, they are notorious for peddling shoddy workmanship that will last just long enough for the sandcrawler to disappear over the horizon.

DANGEROUS PRIZES

The furious winds of Tatooine's storm season can scour ancient pale wrecks from the deep sands of the Dune Sea. Jawa sandcrawlers venture into extremely remote territories after the big storms in search of newly exposed prizes. Larger finds may cause them to call in other clan sandcrawlers to share in the processing. Field smelting factories and sun shelter awnings are quickly erected as the Jawas work to beat the arrival of the next storm. But the wastelands can hold dangers more unexpected than storms.



THE OLD MINING DAYS

The many sandcrawlers used by Jawa clans were built long ago during a mining boom on Tatooine, before the settlers arrived. The fleet of sandcrawlers ranged throughout the uncharted territories encountering fearsome desert creatures and pursuing the valuable minerals found on the salt flats and dune fields. As the years passed it was discovered that the most valuable minerals were found only on the surface. The mining era faded and Jawas later took over the abandoned sandcrawlers.

Millennium Falcon

endless maintenance. Solo makes his living by smuggling everything from weapons to contraband spice through Imperial blockades in the quest for profit outside the Empire's

Life support systems

A Long History

Han Solo won the *Millennium Falcon* from his old friend and fellow smuggler Lando Calrissian in a heated game of sabacc. Lando had no right to complain, having come to own the *Falcon* through gambling in the first place. Over many years, dozens of minor laser hits and micrometeoroid punctures have been patched with micro-panels (or even left alone), giving the ship a dilapidated appearance. Han Solo now refuses to clean up his ship's appearance as a matter of pride

sor dish on the port side can alert Captain perial ships before they become aware of his

Sublight drive exhaust

Rear hover pad and landing gear

Crew's quarters

Cargo bay

The Secrets of Speed

The *Falcon*'s customized hyperdrive system is fully the size of the drive system in a standard YT-1300 freighter,

hyperspace, controlling the warp of the space-time continuum around it. Other ships have tried to match the *Falcon*'s speed without these modifications, and

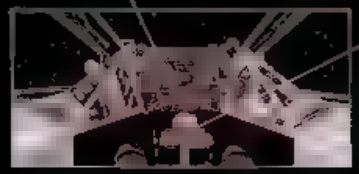
Cockpit

The life of a space freighter involves many long hours of space travel, and

equipped with a Dejarik Hologame table. This table projects several different kinds

T-65 X-WING

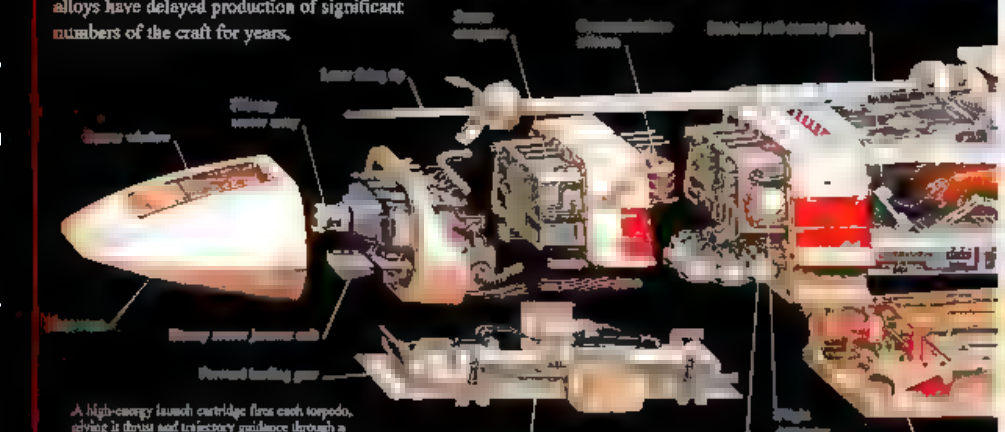
THE X-WING STARFIGHTER was a top-secret project of the Incom Corporation when the Empire began to suspect Rebel sympathies within the company and seized its assets. Key members of the design team escaped with the plans and two prototypes, destroying all other records of the ship. Hence, into the hands of the Rebellion came what would become its finest space fighter. Carrying heavy firepower, hyperdrive, and defensive shields, the X-wing is nonetheless manoeuvrable enough for close combat with the Empire's lethally agile TIE fighters. A truly formidable space superiority fighter, the X-wing's complex systems and rare alloys have delayed production of significant numbers of the craft for years.



Primary control systems similar to those of civilian aircraft like the T-16 Skyhopper

INSIDE THE COCKPIT

The X-wing's highly responsive manoeuvrability can make it a dangerous craft for new pilots to handle. In addition to the fairly straightforward flight control systems, comprehensive cockpit displays allow the pilot to monitor and control energy distribution throughout the ship's systems during combat.



Proton torpedo launch tube

Ventral sensor array

Forward landing gear

Repulsorlift

Engine nacelle

A high-energy launch cartridge fires each torpedo, giving it thrust and trajectory guidance through a precise gyroscopic spin

Proton warhead

Guidance gyro

Arming power shaft

DESTROYER OF THE DEATH STAR

Proton torpedoes such as the MG7-As carried by the X-wing are extremely dangerous focused nuclear explosives. They are used for critical target destruction or to punch through ray shielding that will deflect laser weapons. Proton torpedoes are very expensive and available to Alliance forces only in limited numbers. Luke Skywalker carried only a single pair for his critical shots that destroyed the original Death Star.

INDEPENDENT OPERATION

Hyperdrive and the ability to launch and land without special support enable the X-wing to operate independently, unlike Imperial TIE fighters. The X-wing is equipped with life support sufficient for one week in space: air, water, food, and life-process support equipment are packed into the area behind the pilot's seat. When the ship lands, the air supply can be renewed, and the water and life support systems can be partially recharged. A cargo bay carries survival gear for pilots who land in hostile environments or remote places.

The on-board R2 astromech droid carries out hyperspace calculations and handles in-flight operational adjustments and damage control

Life support

Deflector shield generator

Reactor injector

Turbo impeller

Hyperdrive

Deflector shield projectors

Power generator

Power conversion regulator energy for ship subsystems

Laser cannons

Magnetic flashback suppressors keep the occasional unusable laserbolt from damaging the cannon

Laser-cooling sleeve

THE DOG-FIGHTING EDGE

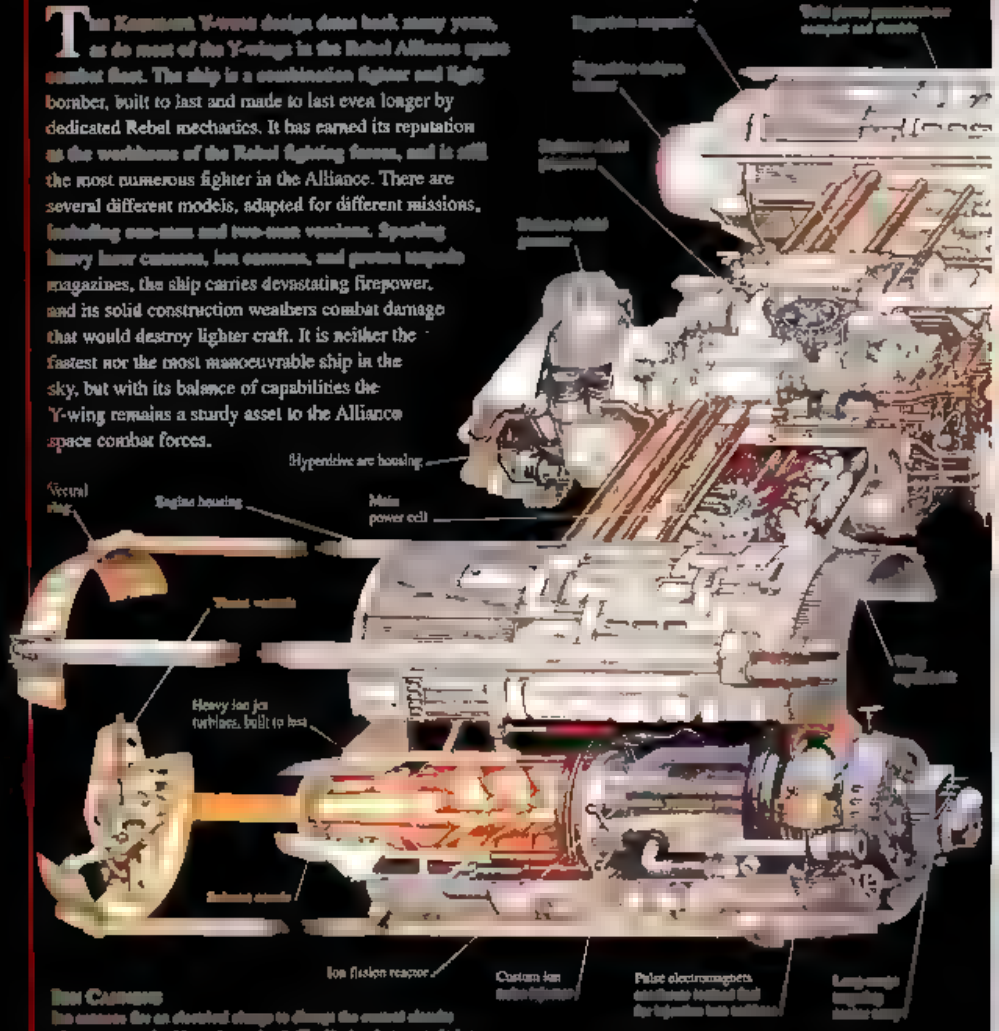
The X-wing achieves its remarkable manoeuvrability through a combination of three factors. Differential thrust from its four fluidal ion engines is the first. High-mass electromagnetic gyros in each of the four retro thrusters add a turning effect that helps to swing the ship in tight curves. Finally, precise bursts of retro-thrust fire forward through the turbine nozzles to add further control and give the ship a critical edge in combat.

LASER CANNONS

The X-wing's laser generators operate at the limits of safety to generate maximum destructive power. The long cannons of the X-wing develop longer range for its lasers, which can engage an oncoming enemy before the enemy can return fire.

BLT-A4 Y-WING

The Koensayr Y-wing design dates back many years, as do most of the Y-wings in the Rebel Alliance space combat fleet. The ship is a combination fighter and light bomber, built to last and made to last even longer by dedicated Rebel mechanics. It has earned its reputation as the workhorse of the Rebel fighting forces, and is still the most numerous fighter in the Alliance. There are several different models, adapted for different missions, including one-man and two-man versions. Sporting heavy laser cannons, ion cannons, and proton torpedo magazines, the ship carries devastating firepower, and its solid construction weathers combat damage that would destroy lighter craft. It is neither the fastest nor the most manoeuvrable ship in the sky, but with its balance of capabilities the Y-wing remains a sturdy asset to the Alliance space combat forces.



Ion Cannons

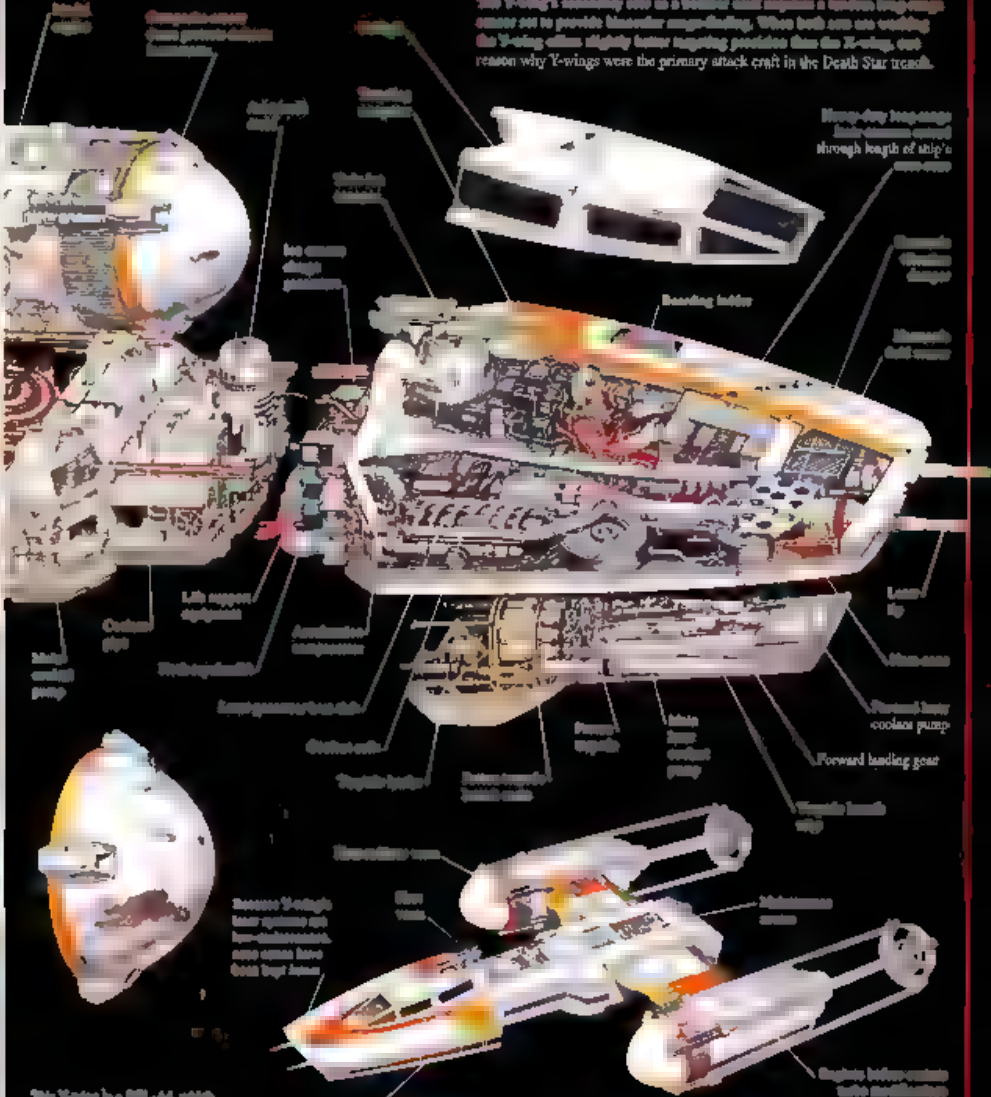
Ion cannons fire an electrical charge to disrupt the control circuitry of an enemy craft without destroying it. The Y-wing features twin ion cannons, but they are extremely delicate instruments. Their crystal emitters inevitably get vibrated out of alignment in flight and combat, and Rebel mechanics hate them for the time they cost in maintenance. For the attack on the Death Star, only two Y-wings in the entire Rebel fleet had functioning ion cannons. These proved adequately useful, and one of them was the only Y-wing to survive the battle.

Cooling System

The Y-wing runs very hot for a ship of its size, and employs a complicated cooling system which runs throughout the ship. Parts of this system need maintenance after every flight. Coolant tubes are often damaged by Rebel mechanics when tasks render inaccessible routine hummingbird inspection.

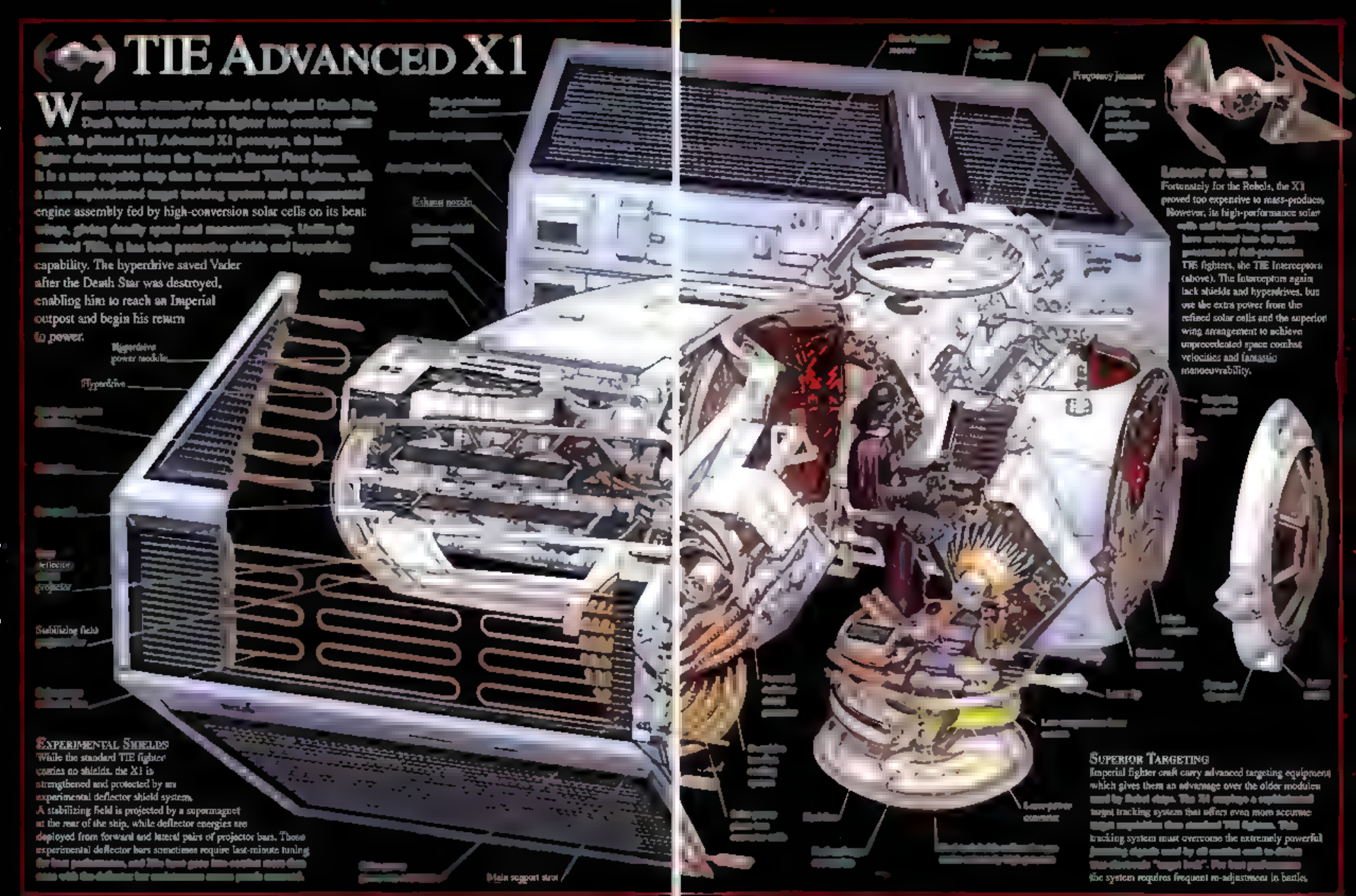
Twin Ion Engines, Foreward

The Y-wing's ascending role as a bomber craft requires a modern long-range engine set to provide hi-accuracy manoeuvring. When both are set to cruising, the Y-wing offers slightly better targeting precision than the X-wing, one reason why Y-wings were the primary attack craft in the Death Star trench.


Hyperdrive coupling sleeve
Hyperdrive motivator
Deflector shield generator
Deflector shield projector
Hyperdrive are housing
Vectral ring
Engine housing
Main power cell
Heavy ion jet turbines, built to last
Ion fission reactor
Custom ion turbo injector
Pulse electromagnetic accelerator method fluid for ignition into turbines
Long-range sensing receiver dome
Ion cannon blast aperture
Ion cannon blast aperture
Ion cannon blast aperture

TIE Advanced X1

When news circulated the original Death Star, Darth Vader himself took a fighter into combat against them. He piloted a TIE Advanced X1 prototype, the latest fighter development from the Empire's Sienar Fleet System. It is a more capable ship than the standard TIE/ln fighters, with a more sophisticated target tracking system and an upgraded engine assembly fed by high-conversion solar cells on its beat wings, giving deadly speed and maneuverability. Unlike the standard TIEs, it has both protective shields and hyperdrive capability. The hyperdrive saved Vader after the Death Star was destroyed, enabling him to reach an Imperial outpost and begin his return to power.



Experimental Shields

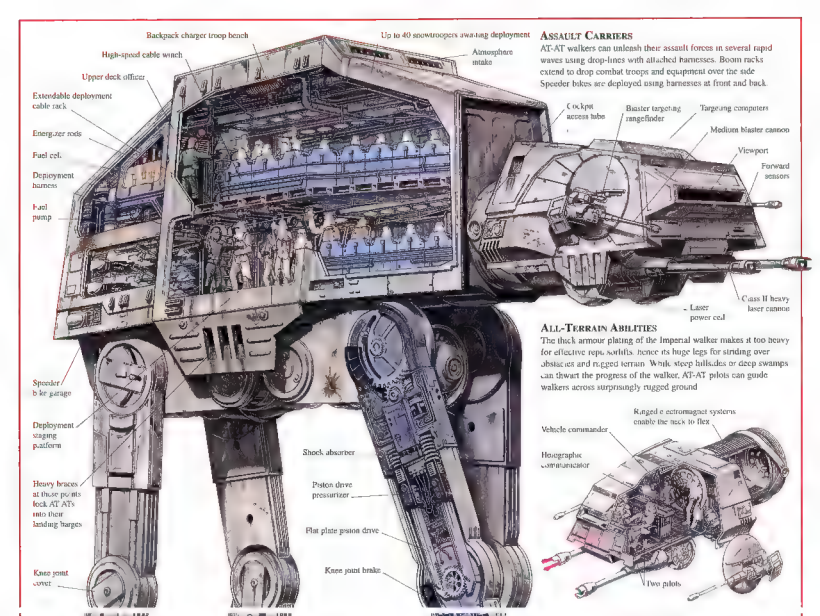
While the standard TIE fighter carries no shields, the X1 is strengthened and protected by an experimental deflector shield system. A stabilizing field is projected by a supermagnet at the rear of the ship, while deflector energies are deployed from forward and lateral pairs of projector bars. These experimental deflector bars sometimes require last-minute tuning for best performance, and the team gave this section more than usual with the deflector bar maintenance crews pacific assistant.

Advance of the TIE

Fortunately for the Rebels, the X1 proved too expensive to mass-produce. However, its high-performance solar cells and hot-wiring configuration have survived into the next generation of full-production TIE fighters, the TIE Interceptors (above). The Interceptors again lack shields and hyperdrives, but use the extra power from the refined solar cells and the superior wing arrangement to achieve unprecedented space combat velocities and fantastic maneuverability.

Superior Targeting

Imperial fighter craft carry advanced targeting equipment which gives them an advantage over the older modules used by Rebel ships. The X1 employs a sophisticated target tracking system that offers even more accurate attack capabilities than standard TIE fighters. The tracking system must overcome the extremely powerful jamming signals used by all combat craft to deliver misinformation "target locks". For best performance the system requires frequent re-adjustment in battle.

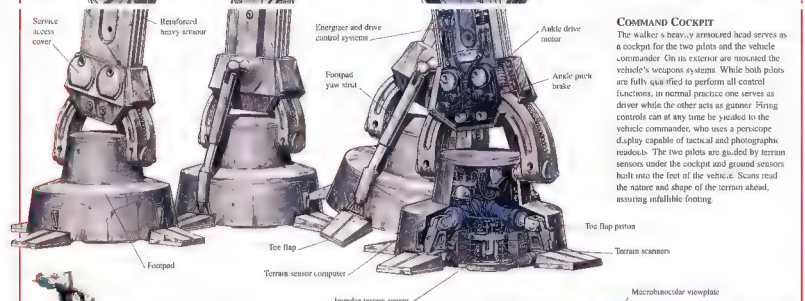


Assault Carriers

AT-AT walkers can unleash their assault forces in several rapid waves using drop-lines with attached harnesses. Boom racks extend to drop combat troops and equipment over the side. Speeder bikes are deployed using harnesses at front and back.

All-Terrain Abilities

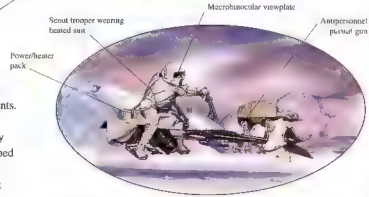
The thick armour plating of the Imperial walker makes it too heavy for effective repulsorlifts, hence its huge legs for striding over obstacles and rugged terrain. While steep hillsides or deep swamps can thwart the progress of the walker, AT-AT pilots can guide walkers across surprisingly rugged ground.



Command Cockpit

The walker's heavy-armoured head serves as a cockpit for the two pilots and the vehicle commander. On its exterior are mounted the vehicle's weapons systems. While both pilots are fully qualified to perform all control functions, in normal practice one serves as driver while the other acts as gunner. Firing controls can at any time be yielded to the vehicle commander, who uses a periscope display capable of tactical and photographic readouts. The two pilots are guided by terrain sensors under the cockpit and ground sensors built into the feet of the vehicle. Scans read the nature and shape of the terrain ahead, assuring infallible footing.

AT-AT



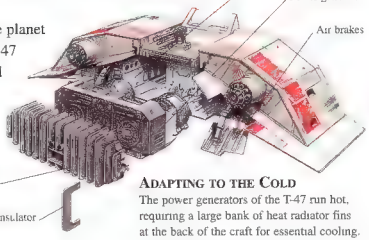
DEPLOYED AS WEAPONS OF TERROR, the gigantic Imperial All Terrain Armoured Transport walkers advance inexorably on the battlefield like unstoppable giants. These behemoth monsters are shielded with heavy armour cladding, making them invulnerable to all but the heaviest turbolaser weaponry. Blaster bolts from ordinary turrets and cannons merely glance off the walker's armour or are harmlessly absorbed and dissipated. A powerful reactor produces the raw energy needed to move this weighty battle machine. Cannons in the movable cockpit spit death and savagery at helpless foes below, cutting a swathe of destruction which the mighty footpads then crash through. Breaking enemy lines with its blaster fire and lumbering mass, the walker functions as a troop carrier, holding in its body platoons of crack assault soldiers, ground weaponry, and speeder bike antipersonnel/reconnaissance vehicles. When this cargo of terror is released into the chaos and destruction a walker has created, another Imperial victory is nearly complete.

Speeder Bikes

AT-AT walkers usually carry a set of high-velocity repulsorlift speeder bikes for scouting or survivor-hunting missions. The speed and agility of these bikes complement the plodding might of the walkers, making the combined assault capability thorough and overwhelming. The colossal size and nightmarish animal resemblance of the AT-AT combine with its combat strengths to give it tremendous psychological power. Until the Battle of Hoth, no army had ever fought resolutely against an onslaught of walkers, so frightening and devastating is their presence.

SNOWSPEEDER

SOON AFTER ESTABLISHING their new secret base on the ice planet Hoth, the Rebels acquired a small squadron of Incom T-47 airspeeders to serve as defensive units. These airspeeders had been equipped with power converters and military-grade laser cannons. Highly manoeuvrable and fast, these airspeeders seemed ideal for the defence of Echo Base. The intense cold of Hoth initially proved too severe for the T-47s, until Rebel technicians modified them to suit their new environment.

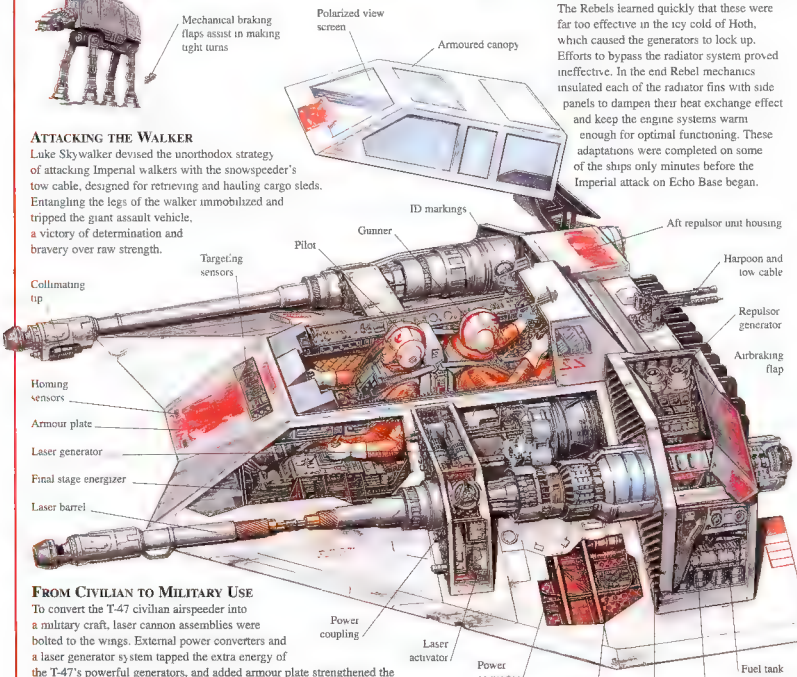


ADAPTING TO THE COLD

The power generators of the T-47 run hot, requiring a large bank of heat radiator fins at the back of the craft for essential cooling. The Rebels learned quickly that these were far too effective in the icy cold of Hoth, which caused the generators to lock up. Efforts to bypass the radiator system proved ineffective. In the end Rebel mechanics insulated each of the radiator fins with side panels to dampen their heat exchange effect and keep the engine systems warm enough for optimal functioning. These adaptations were completed on some of the ships only minutes before the Imperial attack on Echo Base began.

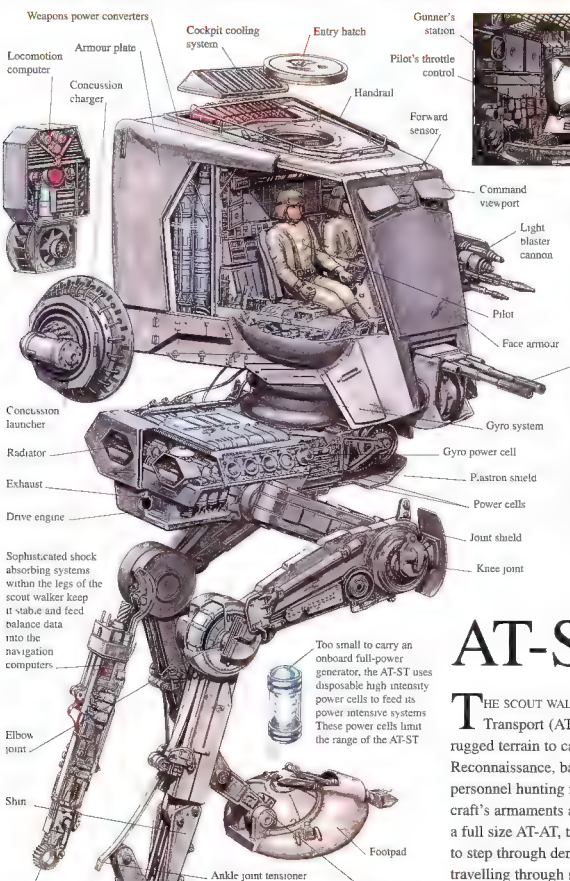
ATTACKING THE WALKER

Luke Skywalker devised the unorthodox strategy of attacking Imperial walkers with the snowspeeder's tow cable, designed for retrieving and hauling cargo sleds. Entangling the legs of the walker immobilized and tripped the giant assault vehicle, a victory of determination and bravery over raw strength.



FROM CIVILIAN TO MILITARY USE

To convert the T-47 civilian airspeeder into a military craft, laser cannon assemblies were bolted to the wings. External power converters and a laser generator system tapped the extra energy of the T-47's powerful generators, and added armour plate strengthened the craft's hull. The result is a short-range attack craft of exceptionally high manoeuvrability. The Rebel snowspeeder's civilian origins and small size explain its lack of defensive shields. In battle the craft relies on speed and agility to evade laser blasts.

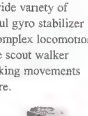


The Cockpit View

Viewscreens and holo-projectors allow AT-ST crew to see ahead and behind simultaneously. While the computer can guide the scout walker over even ground, an expert human pilot must balance the wide variety of data input and control the craft's walking in difficult terrain.

Gyro Stabilized

With an expert pilot at the helm, an AT-ST can move with remarkable agility across a wide variety of terrain. A powerful gyro stabilizer coupled with a complex locomotion system allows the scout walker to mimic the walking movements of a living creature.

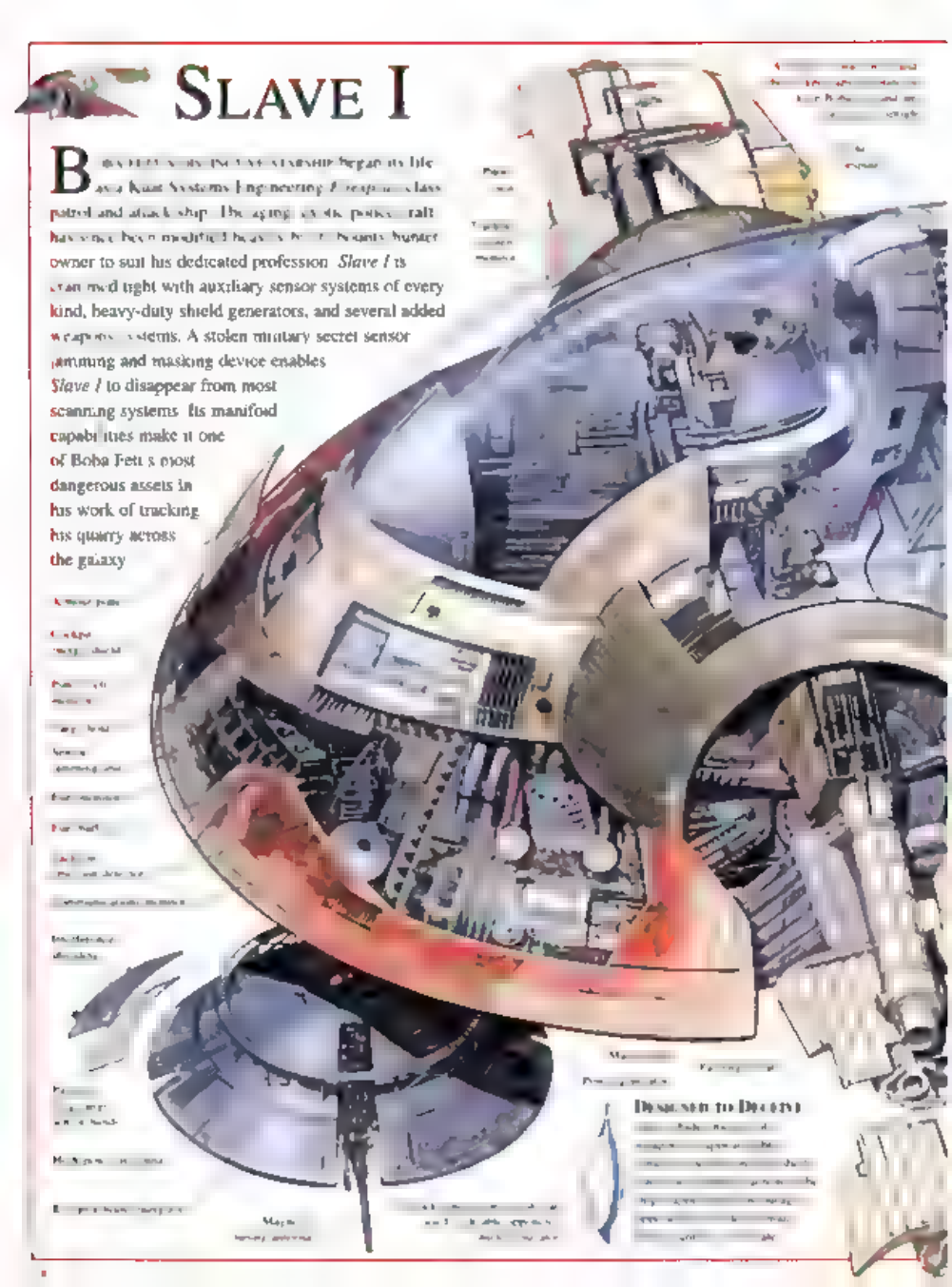


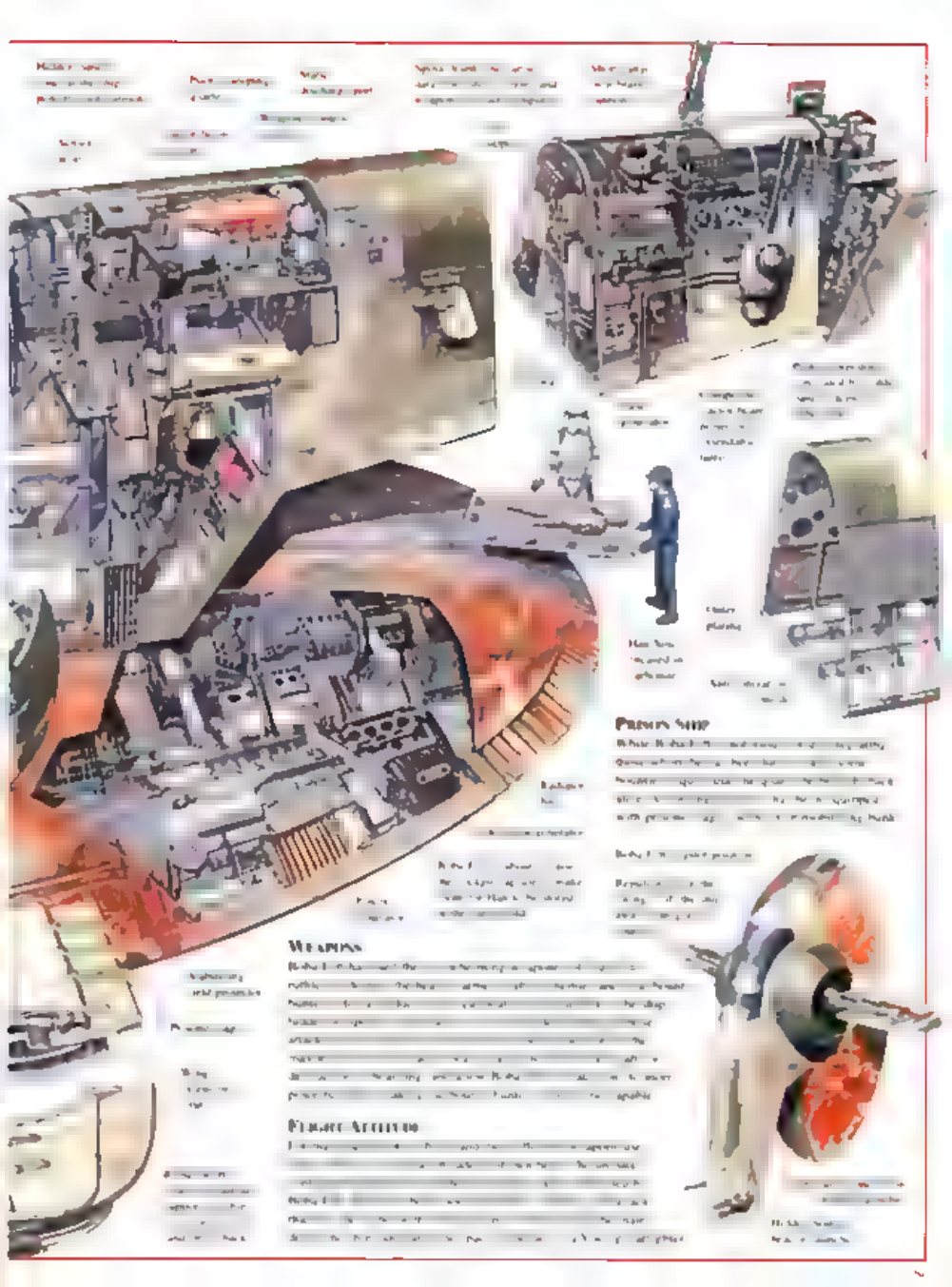
AT-ST

The scout walker, or All Terrain Scout Transport (AT-ST) walks easily through rugged terrain to carry out its missions. Reconnaissance, battle line support, and anti-personnel hunting make excellent use of the craft's armaments and capabilities. Faster than a full size AT-AT, the scout walker is also able to step through denser terrain with greater ease, travelling through small canyons or forest that would stop an AT-AT. While AT-ATs crush main Rebel defensive emplacements, AT-STs ferret out small pockets of resistance or the hiding places of enemy soldiers. Agile and quick, the scout walker is almost impossible to flee on foot, and the sight of patrolling AT-STs strikes fear into isolated ground troops.

Slave I

Boba Fett's starship began its life as a Kuat Systems Engineering *Firespray*-class patrol and attack ship. The aging vessel's profile and hull have since been modified beyond recognition by its infamous bounty hunter owner to suit his dedicated profession. *Slave I* is crammed tight with auxiliary sensor systems of every kind, heavy-duty shield generators, and several added weapons systems. A stolen military secret sensor jamming and masking device enables *Slave I* to disappear from most scanning systems. Its manifold capabilities make it one of Boba Fett's most dangerous assets in his work of tracking his quarry across the galaxy.





Design to Deceive

Power Source

Weapons

Flight Attitude

Jabba's Sail Barge

Jabba the Hutt's sail barge *Khetanna* represents a strange combination of opulence and crude minimalism, befitting the tastes of its vile owner. The giant pleasure craft floats in repulsor lifts, carrying the criminal from his palace in the Tatooine wastes to his Mos Eisley estate and back again. Jabba is also known to take the *Khetanna* sailing far across the Dune Sea to conduct dark negotiations, or to attend distant high stakes races that contribute to his gambling empire. Its most nefarious purposes have involved conveying the Hutt to scenes of executions and also deadly gladiatorial combats staged for his entertainment in remote desert valleys. Wherever it is seen, the barge brings the ominous shadow of its master's presence.

Sail support structure

Entrance hatch

Navigation mainsail

Flight console

Navigation sensor array

Decorative hull plating

Power cell

Ferrule sensor

Plasma cell

Repulsor cooling vents

Steering vane

Engineer's corridor

Repulsor coils

Sand Skiffs

Two sand skiffs accompany the *Khetanna* on its journeys. These repulsorlift skimmers ferry passengers to and from the sail barge. The small craft carry guards and watchmen on the lookout for ambush by any of Jabba's enemies. The guards are small and stocky, being relatively uncomfortable and unprotected from wind, sand, or sun – and are meant to give the guards a clear view of everything around them.

Decorative bas-relief

Princess Leia

Boba Fett

Privacy lounge used by Jabba's most favoured guests and lieutenants

Ventilation grate

Jabba the Hutt. Jabba enters and exits the barge by a large boarding ramp at the aft (rear) deck level on the starboard (right-hand) side of the vessel.

Max Rebo

Bib Fortuna

Thrust chamber

Power generator

Steering repulsor

Decorative finial

Jabba's Pleasures

While other such expensive pleasure craft are fitted out with luxuries of every kind, the *Khetanna* does not have these. Its main luxury is an elaborate kitchen where Jabba's personal chefs prepare the fleshy delicacies and fine wines he enjoys during regular dining. Housekeeping droids prepare his meals at all times. The barge also has quarters for the various hangers-on Jabba entertains.

A variety of guests, criminal conspirators, henchmen, bounty hunters, and other undesirables accompany Jabba on entertainment voyages.

The observation lounge, where Jabba enjoys watching his prisoners' last moments.

Triple thrust turbines use thrust cells, small to carry the barge across long distances.

Sailing the Sand Seas

Sail barges like Jabba's look rather like primitive wind-driven craft. In fact, the decorative sails are more important as awnings, shading those on deck from the glare of Tatooine's twin suns. The sails can and do carry *Khetanna* in moderate winds, but primary propulsion is provided by the ship's thrust system.

Armed Luxury

The *Khetanna* was designed long ago as a pleasure vehicle, and was never meant to be armed. Jabba's activities have brought him under attack more than once, however, and armament modifications were made to the barge at his palace workshops. The hand rails were drilled to provide fittings for portable heavy blasters, and a powerful deck gun was installed to disable attacking vehicles. This gun has also been used to destroy the dwellings of those on Tatooine who oppose Jabba.

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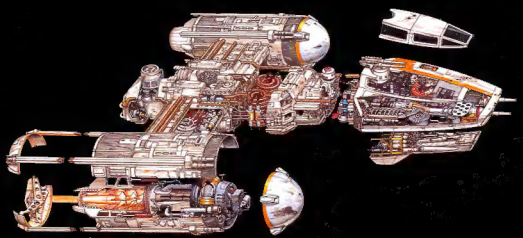

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